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*The Executive*

# PURCHASER



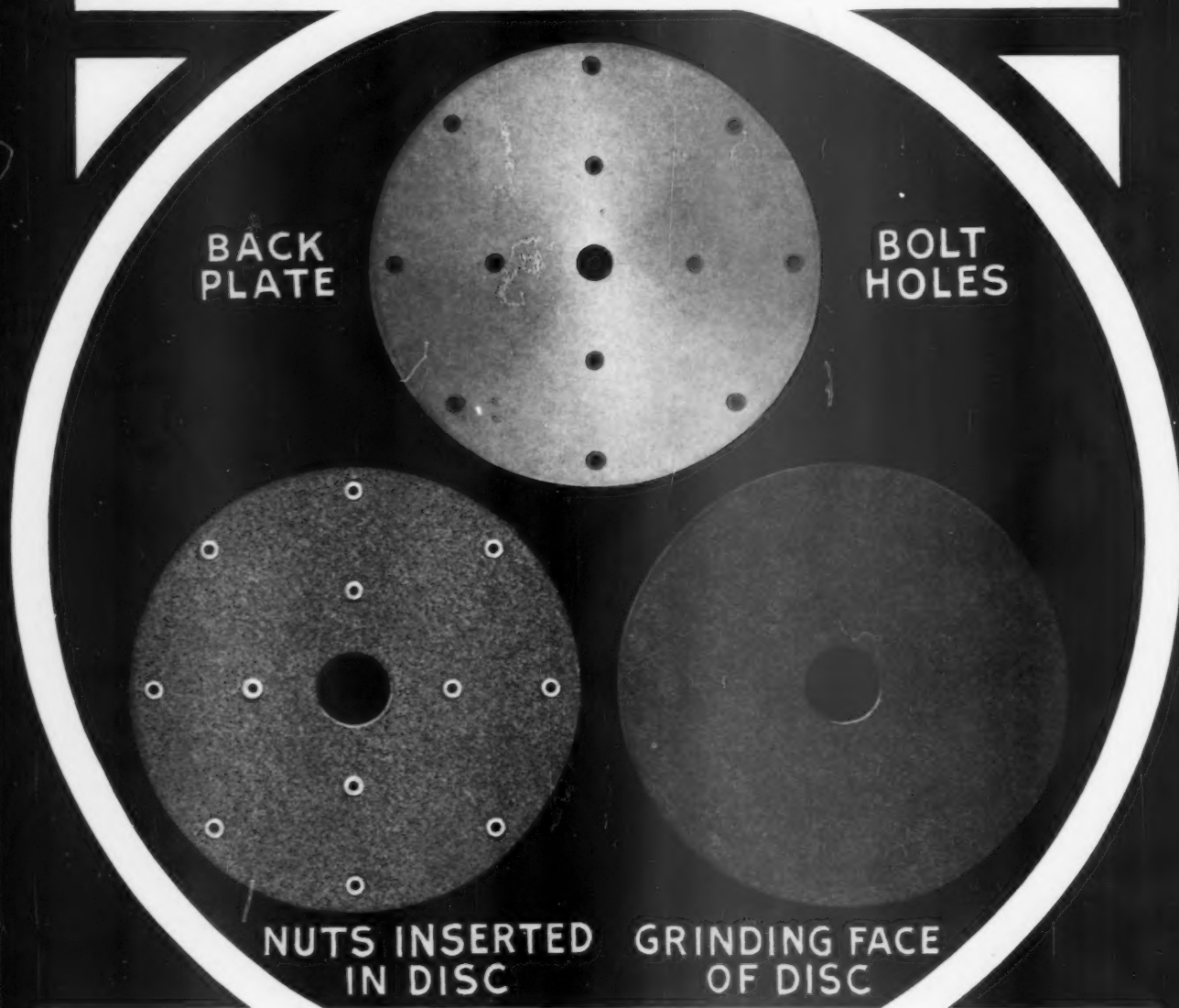
A NATIONAL PUBLICATION DEVOTED TO  
PURCHASING AS AN EXECUTIVE FUNCTION  
IN CORPORATION MANAGEMENT

Volume I

DECEMBER 1933

Number 4

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# *The Executive* **PURCHASER**

(Not the Official Organ of any Association)

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## NEXT MONTH

STUART F. HEINRITZ,  
formerly Associate Editor,  
THE PURCHASING AGENT,  
writes on . . .

**"Purchasing and the NRA"**

*Don't Miss It!*

Published on the fifteenth of every month by Rogreen Publications, Inc., 623 East St. Clair Avenue, Cleveland, Ohio, in the interest of purchasing as an executive function of industrial management. All Editorial and Advertising matter must be at Publication Offices by the first of the month of issue. . . . Readers are invited to contribute editorial material of general interest to Purchasing Agents.

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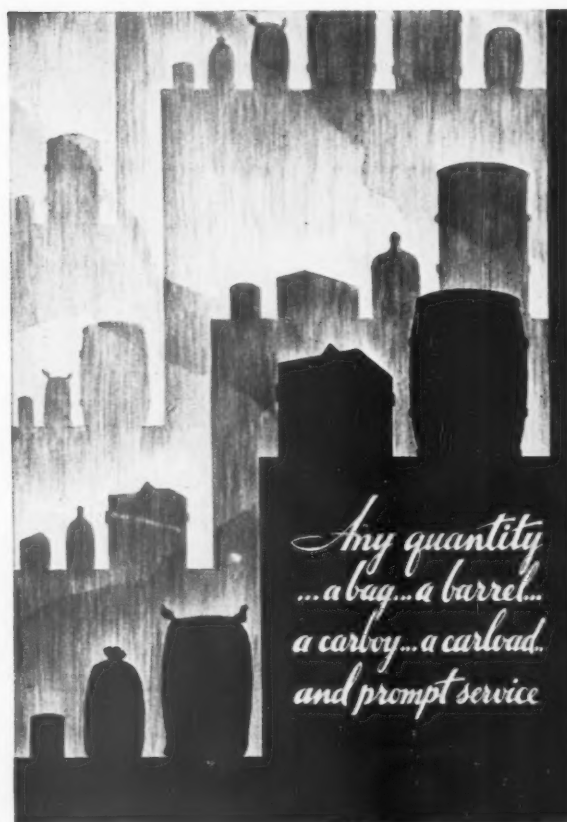
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# EDITORIAL



HERE is December—the month of thin issues and expended advertising appropriations. Yet to balance this we have the most joyous season of the year. A past president of the National Association told us that the greatest Christmas a purchasing director could have would be the money and the authority to release orders to hungry salesmen. That inspires the above picture by Charles Donelan, well known New England illustrator.

With or without the benefits of repeal, there is happiness in our hearts and good will to all.

We are not deeply religious. We go to church when we feel that our soul needs nourishment—which is not often enough. Yet at this time of the year, the anniversary

of the birth of Christ Jesus at Bethlehem inspires us with a reverence that startles us in its intensity.

Recalled to our memories are the Sunday School parties with Santa Claus distributing bricks from the chimney—in reality boxes filled with hard tasteless candy. Yet it was free. Any secretly nourished challenge as to the realness of Santa Claus was summarily abandoned in the fear that we might be wrong and lose out on fondly anticipated gifts.

We are all happy although this year's personal buying activities are of necessity seriously curtailed.

The entire staff of THE EXECUTIVE PURCHASER wish you and yours A VERY MERRY CHRISTMAS!



## Cold Finished "B'ars"

Meet the Ryerson "b'ar"—mascot of our Cold Finished Steel Division. For some time he has been on the job, identifying the Ryerson line of Cold Finished Steels — steels of known quality, triple inspected to assure perfection of finish, accuracy and straightness. Special precautions in storing, handling and shipping protect the material until ready for use.

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Experienced organization and unequalled equipment assure dependability, accuracy and speed. Whether you need a few pounds or a carload, your order will have our personal attention and will be shipped at once.

**90** *years* **- of -** **RYERSON**  
**STEEL SERVICE**



by  
**JOSEPH W. NICHOLSON,**  
Purchasing Agent,  
City of Milwaukee.

# Purchasing: . . .

## MILWAUKEE'S METHOD

*The city with a surplus pays tribute to  
centralized purchasing*

A RECENT article appearing in purchasing periodicals cites 140 reasons for the existence of a purchasing department. These reasons chiefly are applicable to industrial purchasing conditions. How many of these reasons would apply to the specialized fields of public utility, governmental, institutional and educational purchasing is problematical as the conditions are somewhat dissimilar. There are certain fundamental reasons, however, which apply in all cases. They might be summed up as follows:

Centralized purchasing provides a medium whereby an average saving of 15 per cent can be made in the purchase of materials, supplies, equipment and service. This saving is effected in the following manner:

### ECONOMIES

1. Commodities can be contracted for when prices are low. The purchasing agent determines the proper time to buy through a study of markets and obtaining first hand information from those handling the particular commodities in which he is interested.

2. By purchasing in the proper quantities wholesale prices can be obtained. The unit cost, as a rule, is reduced as the volume increases. Additional savings are made because of the fact that this procedure cuts the total number of orders issued and reduces clerical and other office expense.

3. By standardizing, a wide variety of articles is reduced to a few so that as a result better prices are obtained, and departmental operating expense reduced.

4. Specifications can be prepared so that materials suitable for the purpose will be furnished.

5. Goods can be inspected to insure receiving the material specified, thereby preventing the acceptance of merchandise which is shoddy, short-weight or short-count. The centralization of this inspection service reduces the possibility of collusion between vendors and employees, as responsibility for inspection is placed upon a few employees instead of being scattered throughout the entire organization.

6. By setting up a central storehouse division, goods can be stocked which are commonly used by the majority of departments. This will facilitate the making of purchases according to the procedure outlined above. It will make possible the insuring of a uniform grade of goods suitable for the purpose intended as well as making available materials and supplies on short notice when needed. This latter de-

sirable feature of a storehouse has been demonstrated on a number of occasions when it was necessary to furnish tools and supplies for emergency labor.

7. A reduction in vendors' sales expense is effected owing to the fact that salesmen call at one place instead of at many offices scattered throughout the city.

8. Other very desirable improvements are brought about through centralized purchasing in that it provides an opportunity for proper negotiation for bids, open and above-board dealings with vendors and the placing of the entire responsibility for all purchases upon one board, department or individual. This eliminates buck-passing and petty graft and favoritism with the result that a dollar in value can be obtained for every dollar spent.

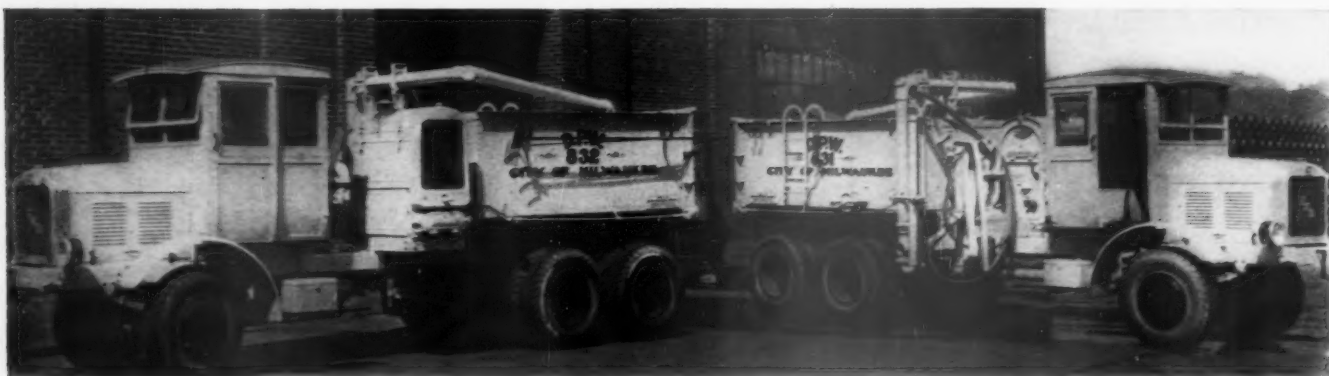
### HISTORY

The central board of purchases of the city of Milwaukee was instituted by state law in the fall of 1917. The present personnel consists of: the mayor (chairman ex-officio), city librarian (vice-chairman), director of public museum, commissioner of public works, su-

*"By standardizing a wide variety of articles . . ."*







*"What taxpayer would not welcome an extra \$1.50 in his deflated purse . . ."*

perintendent of water department, secretary of board of park commissioners, secretary board of estimates and secretary of the board. The vice-chairman and secretary are elected annually by the board. The present city purchasing agent has been secretary since 1918.

The board maintains a department of purchases, a municipal storehouse, two gasoline and oil plants and a multigraph division, all of which are under the direction of the city purchasing agent. Regular meetings are held once a month or oftener if necessary to formulate policies and to award contracts exceeding \$1000 in value. Purchases which are peculiar to the public museum, public library, board of school directors and board of park commissioners are made directly by these boards. With the exception of the school board, all staple articles commonly used by city departments are purchased for these boards by the central board of purchases as well as all of the purchases for departments under the common council of the city.

Coal, gasoline and oil, electric lamp bulbs and calendar pads only are purchased for the school board which maintains its own purchasing department and purchases the balance of its requirements direct.

#### **DIVIDENDS**

The savings effected by the centralization of Milwaukee purchases have been very conservatively placed at 15 per cent of the total amount expended. During the year 1931, a total of \$5,651,856.54 was expended for materials, supplies and minor services. Fifteen per

cent of this amount represents a saving of \$847,778.48. Cash discounts taken during that period were \$54,773.84 or a total saving of \$903,552.32. This represents a per capita saving of \$1.50. What taxpayer would not welcome an extra \$1.50 in his deflated purse as a result of economies at the city hall?

It costs two-thirds of one per cent of the total amount expended to operate the purchasing department, municipal storehouse, municipal gasoline stations and multigraph division. The latter two are on a self-sustaining basis in that they operate on rotary funds which are reimbursed throughout the year as supplies are delivered to city departments, although the \$10,000 rotary fund for the gasoline station is charged against the operation of the purchasing department annually and the salaries of the two employees at this station are paid out of this rotary fund. The same is true of the \$1000 rotary fund set up to maintain the multigraph division and to pay the operator's salary.

Studying the operation of the gasoline station, we find that there has been an average saving over and above all costs of operation of four cents per gallon on gasoline and 12 cents per gallon on oil. Purchases are made in tank car lots and stored in two bulk storage plants conveniently located within the city. These plants are operated by two men only, who unload cars, store and deliver gasoline and oil to all city departments, boards and commissions. Purchasing in tank

car lots effects a reduced price below tank truck delivery, while a large storage capacity permits the purchase of gasoline in large quantities when extremely low prices prevail. For example, in January, 1933, we purchased a number of earloads at two cents per gallon, f. o. b. group 3. The price soon rose to 4½ cents per gallon and has since advanced to a minimum of six cents, as set by the President's NRA Code for the industry.

#### **PRINTING & STORES**

Savings of approximately 20 per cent are made by the use of multigraph machines in the supplying of printed forms such as water bills, tax notices, letterheads, etc., to city departments. The multigraph offices are shared by the health department, election commission and purchasing department, each department maintaining its own machines.

A municipal storehouse is maintained having a stock of between \$20,000 and \$25,000 which turns over approximately four times annually. Besides affording an opportunity for savings because of purchases being made in quantities at wholesale prices, the storehouse provides for careful and much needed inspection before goods are accepted. An illustration of a saving effected by the storehouse is in the purchase of denatured alcohol for anti-freeze purposes.

Each year, a earload consisting of approximately 75 barrels has been purchased in the summer months when the lowest prices prevail. This year we paid 40 cents

*Continued on page 22*



**DR. KARL ARNSTEIN, Designer,  
U. S. S. Macon**

**T**HE moment a thought is advanced relative to a construction project there immediately is presented a mental picture of purchases—the various materials and supplies necessary in carrying the project through to completion. This situation proved unusually interesting in connection with the building of the huge Goodyear-Zeppelin airship dock at Akron, O., and the giant navy airships built in that mammoth structure.

As a matter of fact, the construction of big airships in America is an infant industry and even the Goodyear engineers themselves were unaware of the various ramifications that would enter into the purchasing angle as the building of the dock and the first navy airship got under way.

And when the first ship was completed and a check was made of the many firms from whom purchases were made for materials and supplies, it was found that approximately 200 companies had benefited through the building of the dock and the two airships, the U. S. S. AKRON and the U. S. S. MACON.

At this juncture, however, it will be interesting to note just how this great airship building industry came to America and was centered in Akron, and to get the actual setting it is necessary to go back to 1911, when Goodyear's lighter-than-air activity really began.

## Shipwrights —Akron, Ohio

*A glimpse into the incubator  
where giants are hatched.*

### BALLOONS

Zeppelin airships and Wright airplanes were beginning to demonstrate the two great principles of flight. Goodyear was already in the business of impregnating fabric with rubber. Looking ahead, a market was seen in airship covers and airplane wings, and though rubberized wings, in the case of airplanes, were to be superseded by wings of doped fabric, the business of building lighter-than-air craft was to grow to large proportions.



**PAUL W. LITCHFIELD, Builder,  
U. S. S. Macon**

In 1912 Goodyear built its first balloon, which was used in many flights in the Akron area, and the following year a Goodyear balloon was entered in the James Gordon Bennett international race, starting from Paris, and in a large field of

*"... engineers had made intensive study of design and operation ..."*



entries the Goodyear balloon won, landing in England. This was the first of many victories won in the last 21 years by Goodyear balloons.

Aeronautical activities grew at Akron, and when the World war came Goodyear began building training balloons, kite balloons and small airships on an extensive scale. The problem of training arose and Wingfoot Lake air station, 10 miles from the Goodyear factory, was established. A big hangar, 100 feet wide, 400 feet long and 100 feet high, was built. A hydrogen plant, shops, barracks and other necessary equipment were provided, and Goodyear balloonists were assigned to assembling ships and training army and navy officers. More than 600 trained there went to coastal air stations.

During the war upwards of 1000 balloons were built and about 100 non-rigid airships (sometimes called blimps) were delivered, along with the balloons, to the United States, English and French governments.

#### MIGRATION

In 1924, when the LOS ANGELES was delivered by Germany to the United States, there was presented the possibility of acquiring the German patents for the building of zeppelins in America, as plans were

then under way for the dismantling of the huge hangars at Friedrichshafen, Germany. It was in this emergency that Goodyear stepped in and brought the zeppelin rights and patents to America.

The Goodyear-Zeppelin Corp. was organized and into this organization were thrown all of Goodyear's lighter-than-air experience, personnel and patents. Dr. Karl Arnstein, chief engineer of the old German Zeppelin organization during the time it was building some 75 rigid airships, came to the Goodyear organization, bringing with him 12 of his technical experts. Dr. Arnstein was made vice president and chief engineer.

In 1928, when the United States government awarded Goodyear the contract for two huge navy airships, the company was prepared to start immediately with the erection of a construction dock or hangar and the fabrication of the first ship, later named the U. S. S. AKRON.

#### AIRSHIP DOCK

The dock was constructed at the Akron airport, about two miles from the Goodyear factory and about three-quarters of a mile from the Goodyear-Zeppelin shops. This dock is the largest and perhaps the most unusual building in the world. It is 1175 feet long, 325 feet wide and 211 feet high. Seven football

games could be played under its roof simultaneously; six miles of standard railroad track could be laid on its nearly nine acres of floor. The Woolworth building of New York could be laid lengthwise inside the huge structure and the Washington monument added alongside it, still leaving ample room for visitors to walk through the building.

Preparation of the site for the dock required removal of 1,000,000 cubic yards of earth, and nearly 1300 concrete piles were driven to rock as a base for the structure, each pile being able to stand a weight of 30 tons.

The dock's roof area is 687,000 square feet, while the cubical content of the building amounts to 45,000,000 cubic feet. The structural steel in the four doors weighs 2400 tons and that in the shell and shops 4800 tons, making a total of 7200 tons.

Since the 7200 tons of steel in the framework expand and contract with changes in temperature, the arches of the building rest on rollers, so that the giant building may be said literally to breathe.

#### FIRST SHIPS

The construction of the U. S. S. AKRON and the U. S. S. MACON was authorized by act of Congress in June, 1926, as part of a five-year program of aeronautic development. Decision had to be made

*"Seven football games could be played under its roof . . ."*





whether the construction of the airships should be done by the navy itself. The navy was well equipped to undertake the task. Its engineers had made intensive study of design and operation for years, had collected every scrap of information available and had had access to the files of the allied nations.

However, it seemed desirable for America to have an airship building industry, as it had a shipbuilding industry for surface craft. The World war had indicated the necessity of industrial preparedness, along with military defense measures. Such establishments having plants, specialized machinery and experienced personnel are properly considered a second line of defense. The existence of a building industry for airships might, also, lead to the establishment of commercial air lines whose ships, terminals and personnel would be available to the country in emergency.

Taking various features into account, the navy instituted a design contest, and out of a total of 37 designs submitted the Goodyear-Zeppelin Corp. was awarded first place. Later, however, an eastern corporation, with experience in building surface ships, became interested and asked for an opportunity to submit designs, so the competition was reopened. This time Goodyear-Zeppelin submitted three alternative designs, and in a decision announced by the navy in August, 1928, was awarded first, second and third places.

In October, 1928, formal award of a contract was made to the Goodyear-Zeppelin Corp. for the two big ships.

#### SUPPLIES

Following the award there soon began the activity of making purchases, and, as stated before, nearly 200 companies shared in supplying materials and equipment for the two giant ships, the many hundreds of thousands of dollars going to concerns scattered throughout the length and breadth of the land.

Just as an example, it is interesting to note the various companies in Cleveland which played a prominent part in the construction of the two airships. The Cleveland companies from whom large purchases were made were:

Artisan Metal Works, aluminum furniture.

W. Bingham Co., screws.

Cleveland Pneumatic Tool Co., resiliency devices.

Cleveland Tool & Supply Co., miscellaneous supplies.

Dodd Co., drafting supplies.

Eaton Axle & Spring Co., fuel tank fittings.

B. K. Elliott Co., drafting supplies.

Euclid Crane & Hoist Co., cranes and hoists.

Forbes Varnish Co., aluminum mixing varnish.

Gears & Forgings Co., forged gears.

Great Lakes Aircraft Corp., dies and special channels.

Harshaw Chemical Co., anodic treatment acids.

Herold Manufacturing Co., acetate dope brushes.

Linde Air Products Co., oxygen for welding.

McKinney Tool & Mfg. Co., channel forming machinery.

Midland Steel Co., docking rails.

National Lead Co., solder.

National Screw & Mfg. Co., screws and bolts.

W. M. Pattison Supply Co., mill supplies and fuel line fittings.

Republic Structural Iron Works, Inc., structural iron manifolds.

Sherwin-Williams Co., aluminum mixing varnish.

Steel & Tubes, Inc., steel tubing.

Super Steels, Inc., alloy steel.

W. S. Tyler Co., wire mesh.

U. S. Steel Wire Spring Co., coil springs.

J. C. Ulmer Co., dies.

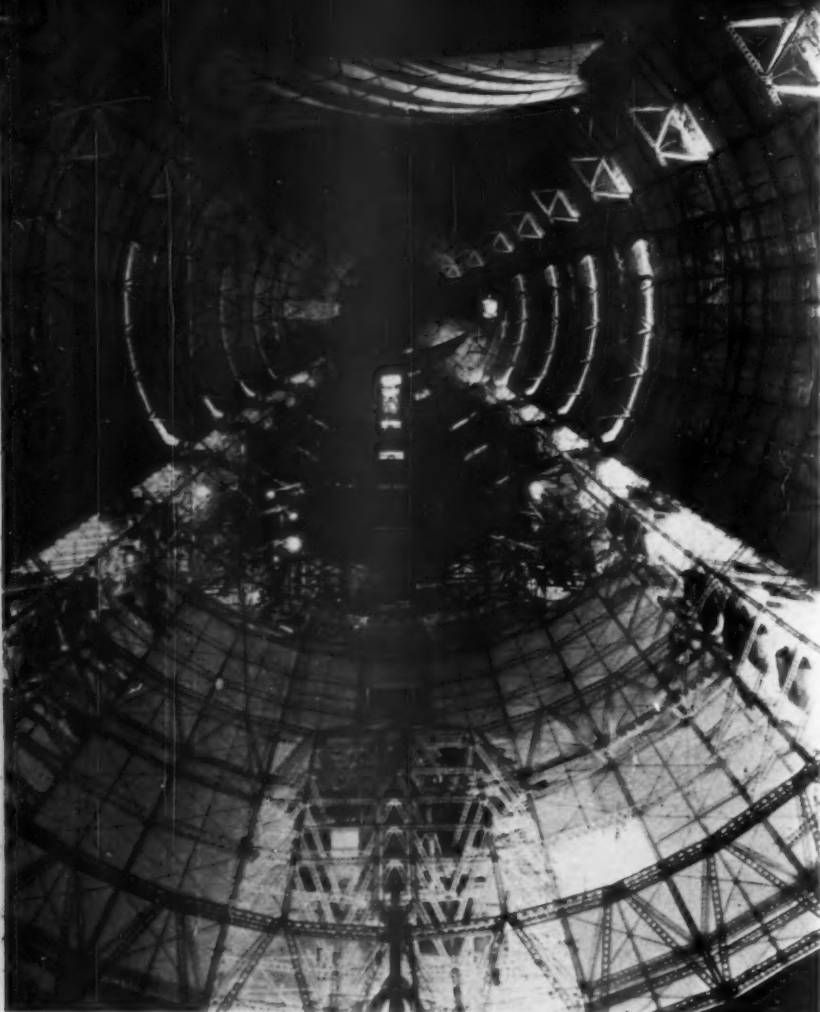
United Screw & Bolt Co., aircraft washers.

Upson-Walton Co., ropes and tackle blocks.

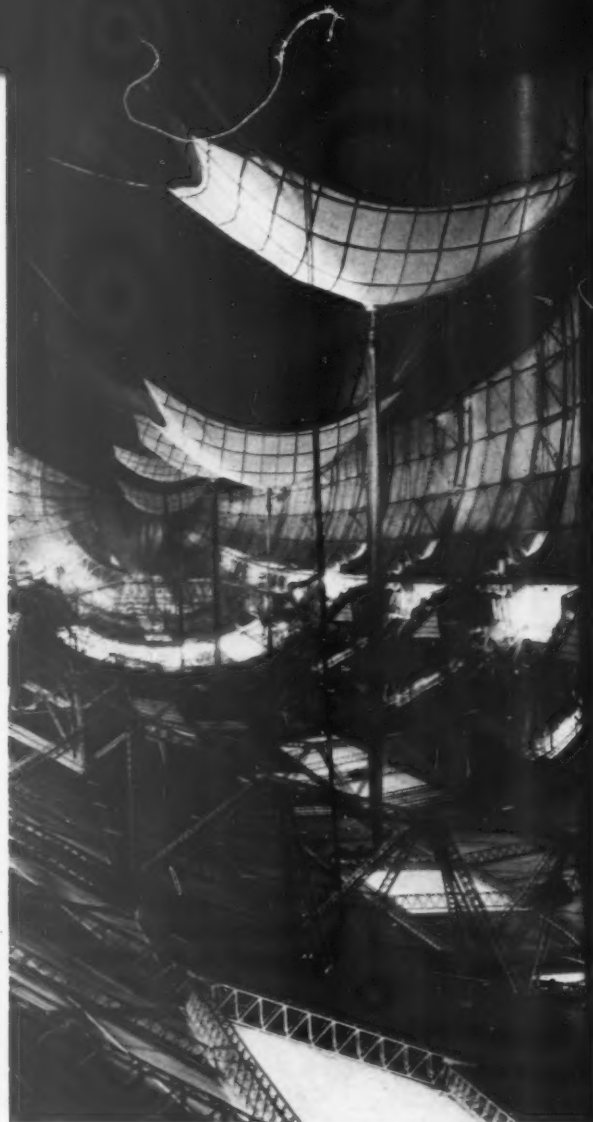
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*"... construction was authorized by act of Congress ..."*





*Above: Interior view of the U. S. S. MACON from nose to tail, while the giant ship was under construction. Note trusses supporting forward control cabin in lower center.*



*Above: Gas cells partially inflated.*



*Left: Some of the numerous fuel tanks.*

# DOLLARS OR DEFICITS

*"Let's Look at the Records"*

by EDWARD T. GUSHEE  
purchasing agent, Detroit Edison Co.

**C**AN you imagine a railroad dispatcher operating even a single-track system without signals?

Can you envision a power plant operator running boilers without a steam or water gauge, running turbines without a governor, or loading generators with no meters to show the load changes?

The answer must be "No."

How then can you imagine a purchasing department operating without accurate and adequate records?

**T**HE purchasing agent is not so much interested in the comparisons of his costs with those of other purchasing departments as he is in the use of such records for the comparative analysis of the operation of his department and as a record of accomplishment. In no other department of a business, perhaps, are dollar records of more importance than in a purchasing department. It is, to some extent at least, a business within a business. If the activities of a purchasing department are segregated into divisions, this record-keeping is simplified and the results are more readily comparable.

The importance of purchasing department records is generally admitted. There has been surprisingly little written, however, on the subject. This lack of published information is not because purchasing departments do not keep such records, but rather, because of differences of organization between industries and within a given industry.

Because of the difficulty of comparisons, the growth and improvement of such records have been slow and difficult. Some purchasing departments handle traffic while others do not; some handle salvage sales while others do not; some have under their guidance

standardization and others not; some have jurisdiction over inspection and others do not.

## RESULT

All of these differences and others not mentioned make any comparison of costs or results very difficult and consequently writers on purchasing have had no incentive to publish information on this vital part of purchasing organization.

The keeping of suitable records is made easy for the purchasing agent by the fact that a profit and loss statement can be drawn for practically every function, so that a glance will tell whether or not the particular division under examination is operating at a profit over and above routine work. This keeping of detailed and accurate figures may seem unnecessarily troublesome and expensive. As a matter of fact, the cost is small, the trouble little and the results great.

The purchasing agent will obtain from the accounting department of the company monthly figures as to the general cost of operating his entire department, including gross pay rolls and other expenses. In some organizations it may be possible for the accounting department to analyze these figures for the department head, but in many cases

it will not be practical for them to do so—at least to the extent which will be of the greatest benefit. This breaking up of figures may be done by the purchasing department, making it possible to get any required combination of figures.

## COST STATISTICS

For purposes of illustration we may consider a purchasing department which has the following divisions:

- Order or Buying Division, including the Follow-up Group
- Traffic Division
- Salvage Division
- Invoice Division
- Records and Research Division, under which ordinarily is found Cataloging and Standardization
- Inspection Division

In general, the figures received from the accounting department can be allocated for each division, or subdivision thereof, for which figures are desired; for example, distribution such as the following:

- Number of employees
- Pay rolls
- Miscellaneous expense
- Stationery and stamps
- Telephones
- Telegrams
- Traveling and Transportation expense.

Following a summary of such tabulations, a record of the number of orders issued can be added, segregating this figure into different classifications if more than one type of order is used by the company; and by applying the number of orders to the figures of every division, the gross cost per order and the cost per division per order can easily be figured. These figures, it is to be noted, can be used only as a general guide in the supervision of the department.

*Continued on page 20*





**T**HAT the United States would recognize Russia, or rather the Union of Soviet Socialist Republics, was inevitable.

Russia has planned her industrial development along American lines of mass production. To do this, Russia needed American goods. The Soviet has been buying American goods in other European countries, paying high prices and heavy interest. This was both expensive and humiliating to the Soviet.

Another way of getting American goods was to deal directly with firms in the United States. Although the two governments have not been on speaking terms, such business relationships have existed and broadened without benefit of recognition. Since 1929 many of the largest concerns in the United States have had contracts with the Soviet. It isn't surprising that one firm very much interested in making some Russian contacts is a manufacturer of razors. Besides having the largest stand of uncut timber in the world, Russia also has the largest stand of uncut whiskers. And other American manufacturers saw equally unlimited possibilities there in other fields.

#### CREDIT

Prior to recognition, however, business with the Soviet was based entirely on personal responsibility. International credit depends upon international recognition. Again the Soviet was forced to buy limited quantities of goods on short term contracts and high interest.

# USA - - USSR

by

VIOLET SHORT SHINN

• • •

Consequently, the Soviet sought recognition by the United States, which was granted because this country could no longer afford to ignore the tremendous potential market offered by Russia for American products. Live stock, agricultural products, semi-finished goods, and above all industrial equipment and farm machinery were needed in Russia. It has been estimated that Russian imports from this country the first year would amount to more than a billion dollars, and for the several years immediately following that country would spend around \$500,000,000 here each year. On the selling side of the picture, it looks as though happy days are here again.

But this Russian trade is not yet in the bag. Whether we get it or not depends next upon whether a satisfactory basis of credit can be established for Russia in this country. And this basis of credit depends entirely upon our buying Russian commodities. A counterbalancing of trade between the two countries — manufactured goods from the United States for raw materials from Russia — must be worked out. A heavy balance of trade will be with the United States. For that reason it is a certainty that within the next few months, Russian commodities will enter our markets.

#### OUTLOOK

The purchasing agent, if he has nothing to worry about, has much to wonder about regarding these Russian commodities. What will we import from Russia? What will be the effect on prices? What are the chances of the markets being



flooded as a result of Russian dumping of raw materials on us, and sending us, our markets, our prices and our P. A.'s haywire?

Recognition of Russia has been a constructive step against the dumping of Russian products on our markets. In the past, due to the pressing obligations of short term credits and high interest, Russia has been forced to dump goods on the world markets at cut-throat prices in order to raise cash. Recognition clears the way for the working out of long term credits. Purchasing agents of the United States have less occasion now to fear sudden slumps in the commodity markets due to Russian selling than at any time since 1929.

Believe it or not, all of our buying from the Soviet will not be done in the I'll-take-this-to-accommodate-you-but-I-don't-really-need-it spirit. There are some things that Russia has for sale that we need, and we need them plenty bad. One of these is wood pulp which is used for making paper. The United States supply of this commodity is practically exhausted, and Russia has an unlimited amount of it.

#### FERROALLOYS

Also Russia can supply a very high grade of ferro-manganese, which is used extensively by the iron, steel and flint glass industries, and also in the making of dry batteries. Several years ago Russian competition to the ferro-manganese industry in the United States was one of the arguments against recognition of that country. However, recently we have been importing

much of this valuable alloy from Cuba and Brazil.

The advent of Russian furs on our market at this time will be advantageous to the American merchants, not to mention the peace of mind it must bring to domestic lap dogs and alley cats who, although they might not know it, have been endangered by the American woman's fur-wearing tendencies. The demand for fur has, during the past few years, increased at a phenomenal rate. Rabbit, once scorned, now after death attains a semi but not moth-proof immortality as lapin or synthetic seal skin which is marketed under a dozen different trade names. American born and unborn sheep, ponies, skunks, foxes, wolves, squirrels, beavers and muskrats find their destinies in fur coats. The Russian furs will be welcomed by the fur dealers in the United States who have been looking around for something else to skin.

#### FWOWNS

The iron and coal industries of the United States, however, are managing to restrain their enthusiasm over the resumption of Russian trade. It is claimed that under certain conditions Soviet iron ore can be delivered to the Atlantic seaboard mills cheaper than it can be obtained from the iron mines in the upper Great Lakes region.

The Soviet produces a very high grade of anthracite coal. In 1929, 370,000 tons of this coal went up in smoke in the United States. Due to its exceptional quality it brought a premium price. The Soviet may also export asbestos and aluminum to the United States. With the growing acceptance of insulation of houses and the many new uses being developed for aluminum, these Russian additions to our markets may hardly be noticed.

In the past, three big bugaboos of Russian competition were wheat, lumber and oil. In 1931, the American surplus of wheat thrown on the world market exceeded the Soviet surplus by many millions of bushels. It isn't likely that the

Soviet will be interested in sending its wheat to a country that already has more wheat than it knows what to do with.

The same situation applies to oil. Although some of the oldest and largest oil fields in the world are in Russia and they are going full blast, Russia finds a much more profitable market for Soviet oil in Europe than she could expect to find here. In fact, it is said that the Soviet has paid certain national debts to other European countries with Soviet oil.

Lumber from Russia, however, is another story. It is believed that the United States will take steps to protect the lumber industry in this country.

#### LUXURY

Russia has no rival when it comes to producing metals and precious stones. Ninety per cent of the world's platinum comes from Russia. Under the most primitive methods of mining, the Soviet is now producing more than sixty million dollars worth of gold annually. Just now the United States is buying almost no gold from abroad; is buying instead its own American-mined metal.

The recovery of the precious stone market depends, of course, on how soon our buying gets back on a luxury basis. Russia produces lapis lazuli, emeralds, diamonds, topazes, onyx and amber.

Another item for our sadly dilapidated luxury market will be the

inevitable Russian caviar. With the prestige of centuries, this item has been with us for a long time and possibly always will be. Just to what extent the demand for caviar increases in this country depends largely upon the advertising which it will be given in the United States. Other fish from the Russian market are herring, cod and salmon, which may be exported smoked or canned.

There will probably be comparatively few purchasing agents who will buy directly from the Soviet, but all buying, from department stores, hotels, restaurants, to the automotive and railroad industries, will feel the effects of Russian recognition.

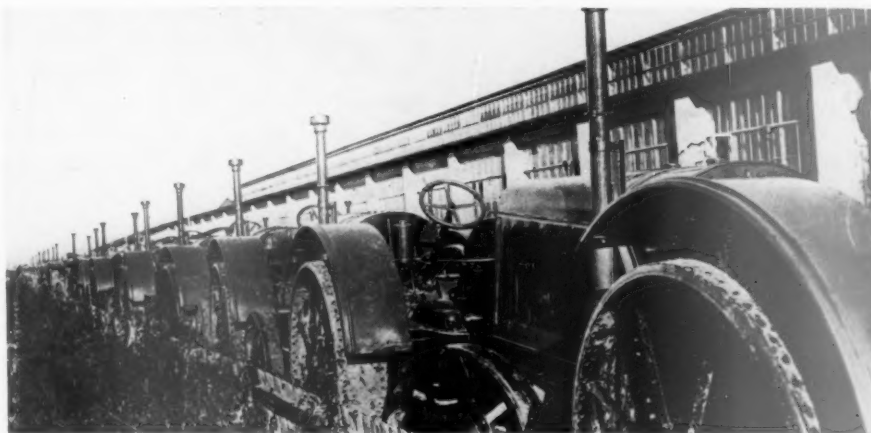
Purchasing-agent recognition of the Soviet is also inevitable. The maintaining of trade relations with the Soviet, and at the same time the protection of our own industries, depends upon the buyer.

• • •

**S**INCE before the days of the first Ptolemy succeeding generations have gauged the development of a nation through pictorial representations of the agricultural life of its people.

Foremost among the present-day interpreters of the modern industrial method is Margaret Bourke-White, whose arresting studies of steps in steel-making, obtained through the courtesy of the Republic Steel Corp., appeared in our last issue.

*"... could no longer afford to ignore the tremendous potential market offered by Russia . . ."*





# ASSOCIATIONS



Annual dinner dance of the Lehigh Valley Purchasing Agents association brought 80 couples to the Americus hotel, Allentown, Pa., Dec. 7. Frank W. Romig, newly elected president, was introduced by R. W. Foltz, retiring head of the association.

Tulsa, Okla., Purchasing Agents association met Nov. 20 at the Tulsa chamber of commerce for a dinner meeting at which George A. Renard, secretary-treasurer of the NAPA was chief speaker. Mr. Renard on the following night addressed the Purchasing Agents association of St. Louis at its Executives' Night meeting in the American Annex hotel, St. Louis.

Purchasing agents of Lansing and Jackson, Mich., comprising the Central Michigan Purchasing Agents association, held a dinner program Nov. 23 at Hotel Downey, Lansing, followed by a demonstration of oxyacetylene welding and liquid air, given by D. E. Phelps, Air Reduction Sales Co., New York.

"India, Behind the Curtain," was the subject of a talk before the Milwaukee Association of Purchasing

Agents at their meeting Dec. 12. The speaker, Mokand Lal Khanna, of Kashmir, India, gave some interesting sidelights on the life of Mahatma Gandhi.

"Traffic and Purchasing" was the subject of a discussion hour conducted by Frederick G. Space, purchasing agent, Seymour Mfg. Co., Seymour, Conn., and past president of the Connecticut Purchasing Agents association, at the state meeting held Nov. 28 at Seymour. A plant inspection of the Seymour company preceded the meeting, at which George A. Renard, secretary-treasurer of the NAPA, was principal speaker.

Purchasing Director Louis Lowe of the Commodore and Biltmore Hotels, New York, recently ordered 75,000 bottles of wine for the cellars of those famous hosteries. The emphasis will be definitely upon domestic wines, according to Mr. Lowe, but it is expected that the older generation of American diners will still insist upon the imported brands.

Mr. H. Carl Goldenberg, sessional lecturer on economics at McGill University, Toronto, speaking before the Purchasing Agents Association of Montreal late in November, predicted that many Canadian industries depending largely upon the American market will have to conform to present industrial trends to preserve that market. In his opinion, important changes in Canada are inevitable should the NRA remain in operation in the United States.

Declaring the NRA ended high-pressure sales, Donald G. Clark added that in the future selling will become more of a barter proposition than ever before in a speech at the meeting of the Worcester County Purchasing Agent's club Nov. 27. Mr. Clark is the chairman of the committee on education for the National Purchasing Agent's Association.

A golf tournament supplied the interest for numerous spectators and participating purchasing agents at the bi-monthly meeting of the Los Angeles County association, held Nov. 23 at Long Beach, Calif. The members were guests of the City of Long Beach.



# PURCHASING LIGHT

by J. L. TUGMAN  
General Electric Co.

**A**LMOST every purchaser of lamps and lighting in quantity is eager to get the most for his money. I say *almost* advisedly since some purchasers consider the sole test of economy in this commodity is the price of lamps, or bulbs as they are popularly termed.

For those who decide their purchases on lamp prices, and buy the cheaper lamps regardless of other considerations, the material which follows may be a welcome surprise.

At this point I must state some axioms of lighting cost which must be observed if true economy is to be effected:

The cost of lighting is the sum of the current and lamp prices; since the cost of current is roughly ten times the cost of lamps, efficient use of current is the proper criterion of lighting economy.

This states the wisdom of the case concisely, but it cannot be realized completely until the whole matter is thoroughly investigated and understood.

## SNARE

The first difficulty in lamp purchasing is that lamps of all varieties of quality look alike on the shelf, and all of them burn with indiscernible differences of light output as far as the eye can observe. Herein lies the snare for the lamp purchaser who considers price alone.

In the manufacture of lamps a great many careful operations are necessary to produce a final product which will burn current efficiently and economically. Mazda lamps, for instance, are not only the product of the most exacting manufacture, but they are also

*Lamps must be made at consistently high standards in order to satisfy the most particular purchasers.*

maintained at uniformly high quality by a thorough testing and checking before they are offered for sale. So it is not merely a matter of what a lamp looks like or simply that it burns, but it is the performance of the lamps over a given period of time that counts.

As a result of long experience, and through the benefit of the research laboratories of the General Electric Co., it has been possible to make lamps which give high, uniform light output for 1000 hours. By high, uniform light output I mean that these lamps will produce a certain number of light units per unit of current burned with only a small loss of efficiency from start to finish. This is vitally important because any lamp from any manufacturer may not perform in this manner. Some of them will be far from it.

## BARGAINS

During the past three years, due to disturbances in world trade, various foreign imitators have been able to put cheap, hand-assembled lamps on the American market at prices which were in some instances below the cost of domestic manufacture. These lamps looked like good, high quality lamps, as far as outward appearances were concerned. These lamps would burn, and, therefore, to a great many unsuspecting purchasers they seemed to be genuine bargains. On the basis of price they represented

great savings compared with the best quality American lamps.

Since quantity purchasers of lamps as well as retail purchasers pay their current bills in 12 monthly installments they are not likely to understand the real difference in lighting costs with lamps of poor manufacture until they make comparative tests.

In charts showing the comparative performances of Mazda lamps and certain foreign lamps it will be noticed that whereas the performance curve for Mazda lamps is nearly a straight line throughout life, the curve of the foreign lamp performance begins to fall rapidly from the start.

The significance of this is that although the lamp burns throughout 1000 or 2000 hours, its low output of light per unit of current burned labels it a waster. Such performance may easily throw away half the current you pay for, and when you consider that current costs about ten times the price of the lamp the folly is obvious.

Had such a lamp been given away it would be too expensive to burn because it transforms current into light so inefficiently.

If I have made myself quite plain about the importance of buying quality lamps and their relative cost to that of current we can consider another phase in the purchase of lamps and lighting. But do not fail to check the performance rec-



ords of lamps that may be temptingly priced!

#### LIGHTING

The best quality lamps insure initial economy of current and the basis for good lighting. There are several related considerations which must be observed, however, if the wise purchase of lamps is to be translated into the most desirable results for those who must

work under the illumination they provide.

Good lighting, as we understand it today, must be of such quantity and quality that the visual tasks to be performed with its aid must involve a minimum of eye strain. That is to say it is quite possible to produce losses through inadequacies of lighting that are not apparent to the casual observer. How may this be avoided?

In the first place the purchaser of lamps should know that the voltage delivered at the sockets in which he is going to burn the lamps corresponds to the voltage of the lamps he buys. This voltage matter is the source of much confused understanding of lighting cost and performance.

Many buildings are so badly wired that the flow of current may

*Continued on next page*

## PNEUMATIC VERSUS RHEUMATIC

NO farmer who ever threw a hackamore on his bucking, snorting tractor and prayed earnestly for strength to stick out the ride can recall the experience without wincing visibly. And no farmer's wife who has had to rub smelly lotions into the twitching muscles of her suffering spouse's spinal set-up can be reminded of it without quietly directing certain strong language toward the barn.

But that's all over now. Farewell to bronco-busting! Goodbye liniments, ointments, pain-killers, salves and meals from the mantel! No more will Ezra clutch wildly for a hold as his plunging steed careens into a bit of rough terrain. No more need Mrs. Ezra give vent to pent-

up emotions in unladylike fashion when her husband, drawn and haggard, limps weakly into the house as dusk falls about the place.

For he won't be limping. And he won't be drawn and haggard. He will be smiling and brisk and even a trifle frolicsome — practically walking on air. And that's not a bad metaphor either, when you consider he's been *riding* on air all day. It's this way:

Advices received from Wilson Bray, sales manager, Truck and Bus Tire division, B. F. Goodrich Co., indicate that the farmer is in for a pretty soft year. A low-pressure balloon-type tire and tube designed to meet farming conditions has been perfected by the Goodrich company for use on tractors.

The tire is made of a special rubber compound, resists abrasion, cuts and snags, has a heavy lug-type, self-cleaning tread and mounts on a regular bona fide wire wheel. It takes the tractor out of the laboring class and makes it an all-purpose unit, suitable for field duty, road work, odd jobs around the house and, with installation of high gear, quick trips to town.

We repeat: It's a pretty soft year for the farmer.

AND here's good news for wheelbarrow pushers of all ages, weights and nationalities:

Pneumatic balloon tires patterned after airplane casings are now available to wheelbarrow owners who are satisfied with nothing



but the best. Seems a little like wall paper for dog houses, at first, but actually it constitutes the first major change in wheelbarrow construction in a great many years and makes possible the use of these sturdy vehicles in mud and soft sand where the old type foundered and sank.

Coal companies will welcome the development, for now the barrow may be whisked over sidewalks and lawns without damage to either, thus avoiding expense and adverse publicity.

Its creators, the B. F. Goodrich Co., are prepared to supply this nifty device in all standard axle sizes and with or without roller bearings.



be several volts below the normal for the neighborhood, and to burn lamps of good quality, but of higher voltage, is to pay for more light than is received. Because lamps appear to give good service over longer periods under such conditions many a purchaser of lamps is persuaded against his real objective of economy to follow this practise.

#### VETERANS

Right here it should be stated clearly that lamp life is rigidly limited in good lamps. This is to insure the maximum period of efficient performance. So remember when someone shows you a lamp that is still burning after three or four or 15 years of steady use no sentiment is necessary. Such a lamp has wasted many times the useful service it has provided.

But in any event burn good lamps at the right voltage. Even a volt below that of the lamp loses appreciable amounts of light. And in order to know that your voltage will be right, it is a good thing to survey the electrical equipment of the places you intend to supply with lamps. This is a fundamental step towards buying the most for your money in lighting. In many instances a survey of the electrical equipment and its use will set the stage for wise purchasing of lamps and lighting.

With good wiring, with lamp voltage and socket voltage corresponding, the next step in the economy of illumination is the layout of your light sources and the quantity and quality of light.

Sometimes the peculiarities of construction of a place in which people work under artificial illumination does not respond to a casual distribution of light sources. Then, too, the character of the work to be done may require unusual lighting performance. Now that handy measuring devices are available, it is an easy task to determine whether or not enough light is being delivered to every workman to enable him to do his work with-

*Testing  
lamp  
base  
for  
strength.*



out visual handicaps. Most purchasers of lighting would be surprised to make such an investigation personally. Insufficient lighting works its harm so subtly few people are conscious of the difficulties it puts upon them.

#### PROGRESS

As we have noted above, the character of the work makes considerable differences in the amount and kind of light required. On this account it is important to know that the simple process of seeing is affected by Contrast, Size, Time and Brightness.

These factors occurring in all visual tasks are best adjusted to the different capacities of individual pairs of eyes through ample and well-designed lighting. Ample lighting, judged by the standards of ten years ago, would be considered quite inadequate today. And ten years hence the ample lighting of today will be regarded as quite unsatisfactory.

This progressively advancing standard of intensities is a gradual development which depends on public recognition of the benefits of more and better lighting. Con-

sider that natural sunlight on a clear summer day supplied approximately 10,000 footcandles, which in the comfortable shade of a tree is reduced to about 1000 footcandles. Consider that human eyes for countless years were developed for use under such conditions. Then realize how we cheat on our eyes when 20 footcandles in 1933 is well above average for many types of installation.

#### FUNCTION

It ought to be borne in mind therefore that the purchase of lamps and lighting is also the purchase of an operating medium for human beings. So much of the world's work is done indoors where artificial light is an absolute necessity, the purchaser of lamps might well consider things this way:

"We have so many pairs of eyes to employ. Indifferent lighting may not mean much loss on the books (although loss will occur) but a lot of human energy will be needlessly wasted.

"Well-planned, ample lighting will put these eyes to work under desirable conditions. Let's do it right."



# Pulse of Business

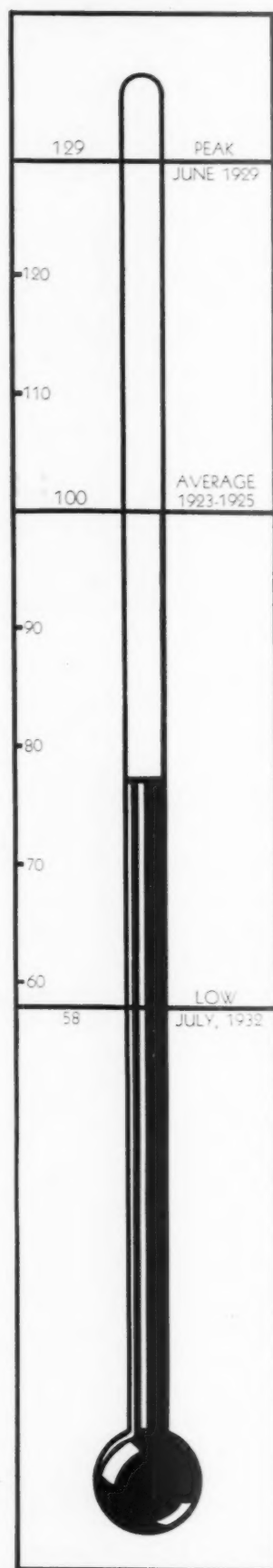
THE upward movement of commodity prices, the administration's primary concern since currency manipulation was openly adopted, was barely noticeable between Oct. 25 and mid-December. Most representative price indexes in the second week of the month were little changed from late October, despite the fact that the gold price was advanced from \$31.36 to \$34.01 an ounce. Had commodity prices increased with the gold quotation, a gain of approximately 17 per cent would have occurred. The increase actually has been less than one per cent. So far at least, Washington's gold policy appears to have had little influence on the movement of commodity prices.

One reason for this seems to be that all the talk of raising prices has been to little avail and unless there are more positive indications of inflation than at present little future buying will be done as a protective measure. It was the expected conversion of money into equities which was counted on by the administration to raise prices.

It now appears that more attention is to be placed on actually increasing purchasing power, which has been lagging, than to artificial stimulation of prices through currency manipulation. Definite announcement to this effect or concerning any future plans are entirely lacking.

In some respects, however, the situation has improved in the past month. Whereas in early November the rapid increase in the buying price of gold suggested that the 50 per cent depreciation permitted by the Thomas amendment was an early possibility, the fact that the price of gold has remained unchanged at \$34.01 an ounce, for nearly two weeks and the successful treasury financing on Dec. 15 in the usual way, though at a higher rate of interest, seem to indicate that a more moderate attitude has been adopted, temporarily. The storm of protest against inflation, and particularly a fluctuating dollar value, appears to have had some effect.

It is quite evident that the gold-buying plan had little effect on short-



INDUSTRIAL  
PRODUCTION

term price movements and has not acted as a stimulant to trade and industry. Cost of living, according to the National Industrial Conference board, was lower in November than in October, but such a condition of monetary uncertainty would be unfavorable, if continued, to business in general, for it interferes with future commitments, placing of long-term contracts and corporate financing, all of which have lagged for many months.

The principle of supply and demand still seems to be the ultimate factor controlling prices and because of this fact the government CWA project, which is resulting in payments of about 40 million dollars a week to people who spend it quickly, has caused an increase in retail trade. With expanding consumption and a regulation of production of basic commodities through the NRA and AAA, an increase in prices, not based on unsound principles, is conceivable.

In this connection, it is interesting to note that the most marked rise in prices of commodities since late October occurred in early December when the buying price of gold was unchanged. This would appear to be directly contrary to the theory behind the recent monetary program. In contrast with earlier periods, however, the bureau of labor's index on Dec. 9 was 70.9 per cent of the 1926 monthly average. This compared with 70.9 on Oct. 28 and 63.6 in early December, 1932. Thus the progress toward the 1926 level, which has been generally accepted as the goal, has not been pronounced. Farm prices on the other hand, despite all measures adopted to raise them, continue only slightly above a year ago and below the peak touched earlier this year.

The statement of Prof. O. M. W. Sprague that what is necessary to raise prices to anything approaching the 1926 level is an increase in credit extended by banks of the country, with a corresponding increase in the volume of deposits subject to check, is significant. In normal times it is estimated that over 90 per cent of the country's business is

*Continued on page 24*

# Commodities

## WHOLESALE PRICES

U.S. BUREAU OF LABOR 1926=100



### STEEL

Production of steel in early December increased contrary to the trend evident at this season of most years, due to increased automobile construction and general steel buying. Higher prices on many grades have already been announced for the first quarter and scrap steel prices have advanced 50 cents to \$1 a ton on most grades.

### COPPER

The copper code is still in doubt and, until adopted, outlook is for limited buying. Prices remain at 8c a pound delivered, to March, 1934. Buying for foreign consumption was active at prices slightly below the domestic level.

### COAL

Production of bituminous coal recently has been lagging slightly behind 1932, though output for the year to date is above last year. Stocks above ground are somewhat higher than last season at this time, but are not regarded as being excessive. Prices of all grades are higher than at any time this year.

### RUBBER

Rubber prices in early December fluctuated rather violently in response to possibility of restriction. Quotations in mid-December were under 9c a pound. Domestic stocks are large, but consumption has been exceeding imports and the amount taken by industry in the corresponding period of 1932 by a good margin.

### LUMBER

A rather sharp decline in demand for lumber followed the heavy buying which preceded the establishment of minimum prices, and orders were considerably below production and shipments. Output in early December was almost double a year ago at this time. Quotations on standard grades were below the peak touched earlier this year, but somewhat above the average prices of the 1927-29 period.

### PAPER

Code approval was followed by a steady- ing of prices, but little change in production or sales has developed. Box-board demand is brisk, but sales of fine paper have been irregular. With the exception of newsprint, prices are at the highest point this year.

### ZINC

Supplies of zinc on hand increased 6000 tons in November, a reversal of the downward trend evident since April, but mine operation was resumed on Dec. 4 after a brief suspension. Zinc is quoted at 4.50c a pound at present, slightly lower than the high point of the year.

### COTTON

The statistical position of cotton continued to improve in recent weeks with mill deliveries up from a year ago. Cotton consumption in the first quarter of this season exceeded any similar period since 1929. Raw cotton market appears rather well stabilized at slightly above 10c a pound.

### OIL

Petroleum prices bid fair to be stabilized as a result of the agreement between Secretary Ickes and producers. Formation of a \$10,000,000 pool to purchase distress oil stocks was expected to maintain prices. Slight increases in prices and demand followed announcement of settlement. Production and refinery activity declined in early December.

# DOLLARS OR DEFICITS

*Continued from page 11*

Applying the dollar value of orders to the total cost of the department, however, gives an average per-cent cost per order for the department and for each division. This per-cent cost is a very accurate index as to the cost of the department and is a helpful figure from an administrative standpoint.

## PERFORMANCE

As the record requires the purchasing agent's further examination, it will be found that special figures are required (usually every month) for different divisions.

Figures in the inspection division as to the per cent of orders inspected, the cost of outside inspection, the dollar amount received on rejections, and the credits received on provisional acceptances are all useful performance records.

So much for the purely book-keeping reports, gathered in the main from the accounting department's figures and from departmental tabulations. Let us look at the resume reports which for the moment we may term "performance records."

An order division should be planned to show very definitely its purchase savings. This does not mean that it can take credit for market declines which tend to show profits, but it can justifiably take credit for worthwhile effort or sound judgment in buying. Debits likewise should be entered to this account. It is not assumed that there is any yardstick for this particular accounting, either between companies in the same industry or between industries. If the purchasing executive will be meticulously careful he can set up such records—minimums, if you will—consisting of items which are not subject to controversy. He will be amazed at the dollar value results,

granting ordinarily efficient purchasing.

## Order Division — Other Reports

A daily report showing the number of requisitions and purchase orders handled by each buying group.

Apparent errors or price differences when orders are posted on the price file cards reported at once to the proper buyer.

Daily reports of commodity markets together with daily indices of the company's own business.

A very interesting record is that of the percentage of unpriced orders in a given period, preferably monthly. The purchasing agent should have this information daily and it should be summarized monthly. Careful attention will reduce the number of unpriced orders which are an abomination to the accounting and other departments of a business. The mechanical cost of issuing an order, typing, sorting, mimeographing, should at least be spot-checked from time to time.

## SALVAGE SALES

Records can also be made of salvage sales. Interesting comparative records can be shown from time to time on the averages of scrap metals against the average market; the development of new outlets for salvage or by-product materials and other well-known means of sales analysis. These, together with all attributable sales, will show a balance sheet, favorable or unfavorable.

It is always interesting and helpful to summarize the work of different parts of a purchasing department at frequent intervals. A quarterly report by divisions fills this purpose adequately. A typical report from an inspection division would list the following items among others:

1. Total orders placed by order division
2. Number of orders pulled for inspection
3. Orders selected for inspection in percentage of total
4. Number of inspection reports turned in:
  - a. Acceptances
  - b. Accepted provisionally
  - c. Progress reports
  - d. Rejections
5. Number of specifications issued:
  - New
  - Revisions
6. Number of special assignments:
  - Completed
  - Avg. in progress
7. Number of man-days traveling
8. Value of material:
  - Net credit rejections
  - Provisional acceptances
  - Total
9. Cost to operate inspection division
10. Cost of research work
11. Cost of outside inspection work
12. Number of employees

In addition to the specific reports above mentioned a report is made of special material studies which are either being carried to completion or are being carried on with the costs and results indicated.

The purchase record group is naturally one which is filled with detailed records and standardization. Quarterly reports indicate the performance of this group under three headings:

1. Purchase record group
2. Vendors' catalog group
3. Economist group

Details of this report would include:

- (1.) A record of a number of orders posted and unposted to the purchase record file
- (2.) Number of records priced in per cent of daily requisitions—priced and unpriced
- (3.) Number of requisitions which require standardization editing
- (4.) List of total items which were standard and not standard
- (5.) Number of sheets printed for standards catalog
  - (a) Routine requisitions
  - (b) New standards
  - (c) Revamping of old standards
  - (d) Distribution of orders for various classes of work; budget comparison being the comparison of actual expenditures to the budget which is true of quarterly reports of all divisions
  - (e) Number of requisitions for information acted upon, such as number and type of inquiries answered



(f) Number and type of reports made therefor

(g) Studies of vendors' catalog files

(h) Number of letters and number of records secured from vendors

The quarterly reports of other divisions follow more or less those listed above, except for the fact that the example given is a more complete report, necessary for satisfactory control of a tremendously detailed effort.

The invoice checking division comprehensive quarterly report will indicate the number of freight bills posted, differences in price and trade discount on invoices, duplicates detected and dollar totals. From time to time the summary of typing carried on in the division is of interest, such as:

Debit and credit memoranda

Traffic division letters and reports

Invoice checking division letters and reports

Goods returned records

Form cards requesting invoices

Traffic division claims

Miscellaneous.

This division will also supply information monthly or quarterly on the number of different kinds of orders issued. Comparisons can be made from month to month or from year to year.

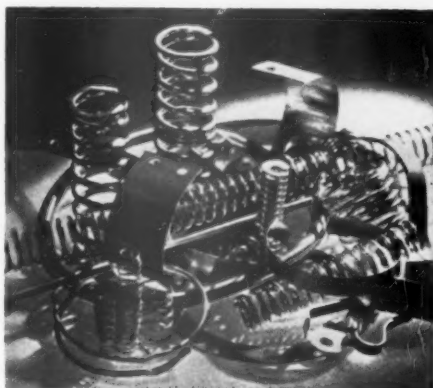
#### VENDORS

It is helpful to keep a record of the amount of business placed from month to month with competing firms. Reports on contracts expiring and on blanket and requirement orders should be made 30 days in advance, to give the buyer ample opportunity to place the order correctly.

#### ORGANIZATION

In reading this article over, the author is again impressed with the fact that it indicates a tremendous amount of clerical fussy work and that many commentators may say the work is for no particular purpose. Having lived with such a system for a good many years and having "checked and double checked" the dollar value of such a system of reports, the author can only say that it is well worth the

# SEYMOUR



For longer service specify springs of  
Seymour Phosphor Bronze

## Better Springs Make Better Products

Get better acquainted with springs of Seymour Phosphor Bronze. Their resistance to corrosion, ability to withstand fatigue, and constancy under sudden temperature change, make them a decided economy where steady performance is vital.

May we send samples for test?

The Seymour Manufacturing Co.  
55 Franklin Street Seymour, Conn.



# Phosphor Bronze

They may be

## "Baloney Dollars"

BUT THEY'RE ALL WE'VE GOT

A Roosevelt dollar is worth  
a dollar in any man's pocket

This is the day when purchasing economies make your dollars — "Baloney" or not — go farther.

Mr. Purchasing Agent — You are buying lots of refractories! Would you be interested in *Cupola, Ladle, or Convertor* relining at greatly reduced costs?

MAIL THIS COUPON TO . . .

THE CLEVELAND QUARRIES COMPANY  
BUILDERS EXCHANGE BUILDING CLEVELAND, OHIO

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
COMPANY \_\_\_\_\_

# PURCHASING: ...MILWAUKEE'S METHOD

*Continued from page 6*

per gallon and the lowest price prevailing at present is 45.80 cents. This represents a saving of \$172.26.

Genuine French chamois were purchased before the United States started to purchase gold in Europe. The saving is now 33 1/3 per cent because of the drop in the value of the American dollar abroad. (French chamois are purchased because they last three to four times longer than the best American chamois and cost only a fraction more.)

## TESTS

Goods delivered directly to departments are inspected by receiving departments, but rejection of materials is not made unless approved by the purchasing agent. Considerable attention has been given to the proper inspection and testing of materials delivered. The department of public works maintains a physical and chemical testing laboratory where paving materials and supplies purchased for

the machine, checking up various kinds of oil and making comparisons.

This machine solved a difficult problem, and the circumstances of its origin might create an additional reason for the existence of a purchasing department.

## RESEARCH

Recently the manager of a large public building asked the city purchasing agent for prices on low gravity fuel oil in order that he might make a study of the com-



*"... a large storage capacity permits the purchase of gasoline in large quantities ..."*

## DOLLARS-DEFICITS

time and labor which it takes, provided always, of course, that a responsible executive reads and uses the reports with a modicum of intelligence. The incentive and pride of accomplishment which such a system engenders in an organization cannot be ignored. It constitutes a major factor of departmental morale.

The same may be said for this matter of records. A small department can work out an adequate system of records just as can a large department and neither should be without them. It is unwise to save a dollar overhead and lose thereby \$100 of purchase profit.

city departments are tested. Recently this work has been curtailed owing to a lack of funds.

An interesting fact developed relative to the purchase of motor oils on specifications. Several years ago it was found that chemical specifications alone would not insure suitable motor oil. A machine was devised by the city chemist, a department of public works mechanical engineer and the city purchasing agent for the purpose of augmenting the chemical tests. This machine tests oil physically under controlled conditions. It is not patented and the principle has since been adopted by several large oil manufacturers; one in particular had several of its engineers at the city laboratory for a number of days testing the characteristics of

parative value of oil and coal in heating the building. The purchasing agent had knowledge of a similar survey having been made by a heating engineer in the employ of the city. By placing this engineer in touch with the building manager, time and money were saved for all concerned.

Similarly when the purchasing agent was asked to purchase boiler and grate parts for the city park conservatory, he placed this engineer in touch with the board of park commissioners for the purpose of studying the plant in question to determine whether it would pay to patch it up, or whether a new plant was needed. It was found to be antiquated and of such under-capacity (due to enlargement of the building) that the

tropical plants and trees were in imminent danger of freezing in sub-zero weather. This coordination of information for the purpose of effecting savings might also be added to the 140 reasons previously mentioned for the existence of a purchasing department.

#### SPECIFICATIONS

In order that competition may be obtained and that all vendors may bid on the same quality of materials and also that city departments may receive the quality of materials suitable for their purposes definite specifications are required. The United States Bureau of Standards, ASA, ASTM and NELA specifications have been used as well as a large number of specifications developed by the city engineer, the city engineering chemist, department heads, and the department of purchases.

*To be concluded next month*

#### SHIPWRIGHTS—

*Continued from page 9*

Weber Brass Co., spinnings.

Willard Storage Battery Co., storage batteries.

George Worthington & Co., mill supplies.

Thus, Cleveland alone was represented by 31 firms in the construction of the two navy airships, and cities outside of Cleveland were represented by approximately 170 concerns.

Again there is demonstrated the far-reaching commercial and industrial activities in connection with the huge airship building project. A contract for an airship is not by any means a transaction in which the Goodyear-Zeppelin Corp. alone is interested or benefits. It is a transaction that reaches out to the four corners of the United States, distributing hundreds upon hundreds of thousands of dollars into the avenues of commerce, incidentally having a most favorable effect on the labor employment situation.

Certainly purchasing is a very big factor in airship building as in any other enterprise.



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## PULSE OF BUSINESS

Continued from page 18

done by check. Consequently more money is in circulation (outside the banks and treasury) at present than in 1929, so that injection of more currency to the circulating medium is not necessary.

The operation of the Federal Deposit Insurance Corp. should increase the public's confidence in the security of their deposits which in turn should result in a return to the banks of a large part of hoarded money, thus making it possible for banks to be more lenient in their loaning policies.

Prices in general are expected to continue firm in the near future. Governmental buying of food for relief purposes, increased purchases of material for PWA projects, more buying of farmers as a result of AAA checks, all point to increased demand, for the necessities of life, at least.

## PURCHASERS' LIBRARY

**Accounting, Theory and Practice of:** Bell, two vols., 532 pages; cloth, \$3.00. A thorough treatment of the uses of modern accounting methods in present-day business.

**Air Brakes:** Ludy, 223 pages, 160m illustrations; cloth, \$2.00. Presents in clearly understandable form the secrets behind modern air brakes for steam and electric railroads, street and interurban railways.

**Auditing:** Graham, 221 pages; cloth, \$2.00. An unusually thorough book written by a well known authority on the subject. Prepared in a clear and interesting manner.

**Aviation Engines:** Kuns, 204 pages, 100 illustrations; cloth, \$2.00. Deals with the latest developments in airplane motors. Excellently illustrated.

**Blueprint Reading for the Machine Trades:** Fortman-McKinney, 154 pages, 89 illustrations; cloth, \$1.50. An exceptionally clearly written book on this very important subject.

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